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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,518	10/04/2005	Yuriy Sergeevich Volkov	P07129US00	6161

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DES MOINES, IA 50309-2721

EXAMINER	
WALTERS JR, ROBERT S	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
02/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,518	VOLKOV ET AL.	
	Examiner	Art Unit	
	ROBERT S. WALTERS JR	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2009*.

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,21-27 and 29-35* is/are pending in the application.

4a) Of the above claim(s) *1-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-27 and 29-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

Claims 1-8 are withdrawn as being drawn to a non-elected invention. Claims 9-20 and 28 are cancelled. Claims 21-27 and 29-35 are presented for examination.

Response to Amendment

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

Applicant's arguments, see amendment, filed 2/9/2009, with respect to the rejection(s) of claim(s) 21-27 and 29-35 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Delot (GB 1546635).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 21-27 and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delot et al. (GB 1546635).

I. Regarding claims 21, 22 and 24-27, Delot teaches a device for applying coating to a lengthy product (see Figure 1), such as a wire (column 1, lines 30-37) by plunging the product into a melt of the coating comprising:

(a) a tank with the melt with means for heating the melt (see element 12, Figure 1 and column 2, lines 71-75);

(b) a camera for applying the coating melt above the tank and having opposite input and output passages (located in the side walls of the camera) through which the product passes (see element 5, Figure 1);

(c) the camera having in its lower part an intake vertical passage plunged into the tank (element 24, Figure 1); and

(d) a valve or outlet for introducing gas into the camera that could control the pressure in the camera.

Delot further teaches maintaining the pressure in the system equal to the atmospheric pressure (column 2, lines 51-53), and the camera having level control means (see element 10, Figure 1). Delot further recognizes that other known methods for applying the molten metal to the camera can be substituted for the pump (column 6, lines 94-97).

Delot fails to teach the camera and tank having pressure control and discharge means as claimed such that the melt is transported to the camera. However, it is well known in the art at the time of the invention that liquid, specifically molten metal, can be transported by differences in pressure. Furthermore, pumps (which Delot is utilizing) generally act to provide a pressure differential to move liquids from one location to another. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Delot's apparatus by including an outlet in the upper portion of the camera to discharge pressure, and an inlet in the tank, to create pressure, whereby the melt can be transported to the camera by a created pressure differential. One would have been motivated to make this modification as it would simply be the substitution of a pressure differential for moving molten metal in place of a pump as used in Delot's method. Further, one of ordinary skill could have made this substitution with a reasonable expectation of success simply by utilizing valve 2 (see Figure 1) in Delot's device for evacuating the camera to pump some liquid from the tank to the camera, and if necessary applying an inert gas inlet above the melt in the tank to create more pressure in the tank. Finally, the results of this substitution would be predictable, namely it would essentially provide a pump for transporting molten metal to the coating camera.

II. Regarding claim 23, Delot teaches all the limitations of claim 21 as well as the tank having melt heating means (see above) but fails to specifically teach the camera having melt heating means. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Delot's device by also having the camera having melt heating means. One would have been motivated to make this modification to ensure that the melt in the camera does not solidify and destroy the functionality of the device.

III. Regarding claims 29-31 and 33-35, Delot teaches a device for applying coating to a lengthy product (see Figure 1), such as a wire (column 1, lines 30-37) comprising:

(a) a tank with the melt with means for heating the melt (see element 12, Figure 1 and column 2, lines 71-75);

(b) a camera for applying the coating melt above the tank and having opposite input and output passages (located in the side walls of the camera and below the level of coating material in the camera) through which the product passes (see element 5, Figure 1);

(c) the camera having in its lower part an intake vertical passage plunged into the tank (element 24, Figure 1); and

(d) a valve or outlet for introducing gas into the camera that could control the pressure in the camera.

Delot further teaches the camera having level control means (see element 10, Figure 1). Delot further recognizes that other known methods for applying the molten metal to the camera can be substituted for the pump (column 6, lines 94-97).

Delot fails to particularly teach the device having inputs and outlets for increasing and decreasing the pressure to cause melt to flow to the camera or having the pressure of the camera less than atmospheric to prevent leakage of the coated material through the inlet and outlet of the camera. However, first, it is well known in the art at the time of the invention that liquid, specifically molten metal, can be transported by differences in pressure. Furthermore, pumps (which Delot is utilizing) generally act to provide a pressure differential to move liquids from one location to another. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Delot's apparatus by including an outlet in the upper portion of the camera to discharge pressure, and an inlet in the tank, so create pressure, whereby the melt can be transported to the camera by a created pressure differential. One would have been motivated to make this modification as it would simply be the substitution of a pressure differential for moving molten metal in place of a pump as used in Delot's method. Further, one of ordinary skill could have made this substitution with a reasonable expectation of success simply by utilizing valve 2 (see Figure 1) in Delot's device for evacuating the camera to pump some liquid from the tank to the camera, and if necessary applying an inert gas inlet above the melt in the tank to create more pressure in the tank. Finally, the results of this substitution would be predictable, namely it would essentially provide a pump for transporting molten metal to the coating camera.

Second, it is well known that pressure differentials can be used to contain materials in given locations which would be expected to retain coating material in the desired area. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Delot's device to include an outlet above the melt level of the camera to

release pressure such that the pressure in the camera becomes less than the atmospheric pressure to insure that coated material does not flow through the inlet and outlet. One would have been motivated to make this modification as this would help to ensure that the coating material remained in the camera rather than escaping back to the tank through the inlet and outlet, and also preventing excess coating material from building up upon the product before being completely immersed in the coating material or after being removed from the immersion.

IV. Regarding claim 32, Delot teaches all the limitations of claim 29 as well as teaching the tank having melt heating means (see above) but fails to specifically teach the camera having melt heating means. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Delot's device by also having the camera having melt heating means. One would have been motivated to make this modification to ensure that the melt in the camera does not solidify and destroy the functionality of the device.

Conclusion

Claims 1-8, 21-27 and 29-35 are pending.

Claims 1-8 are withdrawn.

Claims 21-27 and 29-35 are rejected.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is

(571)270-5351. The examiner can normally be reached on Monday-Thursday, 6:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S. WALTERS JR/
February 20, 2009
Examiner, Art Unit 1792

/Michael Barr/
Supervisory Patent Examiner, Art Unit 1792

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